

GAS STORY

The Great American Sound Company was formed by a small group of engineers dedicated to achieving perfection in sound reproduction. For this group, whose earlier contributions helped to advance the state-of-the-art in the audio industry, the new venture released their creativity and imagina-

tion, the result of which is reflected in the design and performance excellence of GAS Company products. In slightly more than three years, GAS Company's electronic components have achieved worldwide recognition as being among the finest.

GAS AMPLIFIERS

Since the introduction of Ampzilla, Great American Sound Company's first product, an entire family of power amplifiers has evolved to fill a variety of power and price requirements. All GAS Co. amplifiers reflect the same basic design philosophy: to make the finest high-fidelity power amplifiers in the world.

Specifications alone cannot tell the whole story. GAS Co. encourages prospective customers to listen carefully to its amplifiers with any and all types of speaker systems. Only in this way can the true sonic behavior of the amplifier best be evaluated.

Contributing to the leadership attained by GAS Company's power amplifier line are these features:

COMPLEMENTARY-SYMMETRY

GAS Company has incorporated the inherent superiority of Complementary-Symmetry design in all audio circuitry of every GAS Company power amplifier. This design takes advantage of the inverse NPN/PNP semiconductor relationship and results in self-cancellation of even-order distortion products. It also provides balanced operation of the positive and negative segments of the audio waveform, equal slew rates for both ascending and descending waveforms, and the simplification of direct-coupling of circuit stages to eliminate low-frequency phase distortion.

SERVO-CONTROLLED CIRCUITRY

The elimination of DC offset voltage at the output of DC-coupled amplifiers is difficult to achieve because of such obstacles as thermal drift, parameter variations, and aging. To overcome them, GAS Company developed its servo amplifier which corrects for DC error voltages. This design was first developed for the GAS Company moving-coil phono pre-

amp in Thaedra, wherein the high gain involved demanded the most accurate possible control of its DC parameters. Because of the effectiveness of the Servo Control Amplifier, GAS Company now incorporates its benefits in both Grandson and Ampzilla IIA power amplifiers.

LOW-IMPEDANCE PERFORMANCE

Although it is customary to cite 8-Ohm speaker operation for power amplifiers, GAS Company has long recognized that many popular speakers having 8-Ohm impedance ratings also frequently dip to lower values. GAS Company amplifiers are specifically rated at 4-Ohms and, in the case of Son of Ampzilla and Grandson, the output ratings are extended to include 2-Ohm operation. This extended impedance rating permits paralleling of speaker loads as well as amplifier bridging for significantly increased power output.

PROFESSIONAL POWER OUTPUT METERS

Rear-lighted power output meters calibrated in Watts and dB are included on all GAS Company amplifiers, since professionals continue to choose them over light-emitting diodes (LED's) for their more readily discernible indication of power output.

PERFORMANCE-SELECTED COMPONENTS

In order to achieve highest standards of reliability and performance, all GAS Company power amplifiers contain: glass-epoxy printed circuit boards throughout; precisely matched NPN/PNP semiconductors; easily-serviceable construction modules; output binding posts supplied with banana plugs; provisions for rack mounting; and mil. spec. black-anodized aluminum construction. Ampzilla IIA and Son of Ampzilla also feature corrosion-free, gold input jacks which ensure minimum contact resistance.

AMPZILLA IIa



When Ampzilla, GAS Company's first and best-known product, arrived on the audio scene, it introduced many new ideas and concepts which have since become standard among the products of other contemporary manufacturers. Ampzilla was one of the premier high-powered amplifiers to use fully complementary circuitry throughout. It was soon recognized as a classic design.

The original Ampzilla has undergone a carefully controlled evolution culminating in the development of Ampzilla IIa. Ampzilla IIa is an amplifier with the sonic accuracy and high power output that will likely make it a classic in its own right. Appropriately, Ampzilla IIa is used as a reference standard by many whose living depends on state-of-the-art amplifier performance.

1. Fully-complementary symmetry throughout
2. Servo-controlled DC-coupling after input capacitors
3. More than 360 Watts per channel into 4-Ohms

4. Slew rate of 50V/ μ sec, extending high-frequency response to beyond 160kHz
5. Integral-fan forced-air cooling system for continuous operation into 4- or 8-Ohms
6. Low-level Class A operation
7. Stability into any load angle from 0° to 90°
8. Negligible Transient Intermodulation (TIM) Distortion
9. Massive 1.5 K Watt power transformer (weighing almost 30 lbs.)
10. 33,600 μ F of computer-grade electrolytic filter capacitors
11. Rear-illuminated meters calibrated in Watts and dB's with selectable sensitivity
12. Front-panel replaceable speaker fuses
13. Two front-panel stereo headphone outputs for electrostatic and dynamic phones
14. Rack mountable
15. Close-tolerance components: glass-epoxy printed circuit boards throughout; binding posts with banana plugs; Mil.-spec. anodizing; gold-plated input jacks

Power Output in Watts, RMS per channel 20Hz-20kHz	@ 8 Ohms: 200 @ less than .05% H. Dist. @ 4 Ohms: 360 @ less than .15% H. Dist.
Total Harmonic, IM, and TIM Distortions from 0.25 Watts to rated output at 8 Ohms	Harmonic: 0.05% IM: 0.05% TIM: 0.01%
Hum & Noise below rated power	100dB
Rise Time	2 μ seconds
Slew Rate	50V/ μ second
Frequency Response	-0.1dB from 0.12Hz to 20kHz
Input Sensitivity for Rated Output	1.6V RMS
Input Impedance	75K Ohms
Damping Factor	150 from 20Hz to 1kHz
Dimensions: W x H x D:	Rack 19" x 8" x 12"/48cm x 20cm x 30cm Std. 17½" x 8" x 12"/45cm x 20cm x 30cm;
Weight:	59 lbs./25.5kg

SON OF AMPZILLA



The Son of Ampzilla was created to fill the demand for a medium-powered amplifier with true "state-of-the-art" characteristics. In both design and performance, it is an unmistakable offspring of Ampzilla, containing the same fully complementary-symmetry concept and low-level class A operation as its famous "father."

In addition to its 4- and 8-Ohm operating ability, the Son of Ampzilla is designed to handle 2-Ohm loads. This feature is particularly useful for driving multiple speaker pairs, and for expanding the Son's power capability to 300 Watts (at 8 Ohms) when used as a bridged pair.

Exceptional stability and excellent sonic features have made Son of Ampzilla GAS Co.'s most popular product.

1. Fully-complementary symmetry
2. Two-Ohm operating capability at 250 Watts per channel
3. Stability into any load angle from 0° to 90° regardless of load type
4. 16-Ampere peak-current capability
5. Negligible Transient Intermodulation (TIM) Distortion
6. Rear-illuminated power-output meters calibrated in Watts and dB's
7. Rack mountable
8. More than 1000 square inches of convection-cooled heat sinks
9. Optional handles available
10. Close-tolerance components: glass-epoxy printed-circuit boards throughout; binding posts with banana plugs; gold-plated input jacks; Mil.-spec. black anodized aluminum modular construction

Power Output in Watts, RMS per channel 20Hz-20kHz	@ 8 Ohms: 80 @ less than .08% H. Dist. @ 4 Ohms: 150 @ less than 0.2% H. Dist.
Total Harmonic, IM, and TIM Distortions from 0.25 Watts to rated output at 8 Ohms	Harmonic: 0.08% IM: 0.08% TIM: 0.01%
Hum & Noise below rated power	100dB
Rise Time	2 μ seconds
Slew Rate	40V/ μ second
Frequency Response	-0.1dB from 0.5Hz to 20kHz
Input Sensitivity for Rated Output	1.0V RMS
Input Impedance	75K Ohms
Damping Factor	500 from 20Hz to 1kHz
Dimensions: W x H x D:	19" x 5½" x 12"/48cm x 14cm x 30cm
Weight:	35 lbs./16kg

GRANDSON



Grandson, the baby in GAS Company's family of amplifiers, proves that lower power output does not preclude excellent sound. It is capable of sounding as mighty as its "parents" and it features, like the Son of Ampzilla, the ability to flawlessly manage 2-Ohm loads.

Grandson is an ideal amplifier for bridging; start with one Grandson and later, when more power is required, add another. A pair of bridged Grandsons will yield 160 Watts per channel into 8-Ohms.

Grandson is also ideal for apartment-sized stereo systems or high-efficiency speakers, multiple speaker pairs, headphones, and for those with state-of-the-art aspirations, but more-moderate budgets.

1. Fully-complementary symmetry
2. Servo-controlled DC-coupling after input insulation capacitors
3. Stability into any load angle from 0° to 90° regardless of the load type
4. Negligible Transient Intermodulation (TIM) Distortion
5. Rear-illuminated power output meters calibrated in Watts and dB's (metered version only)
6. Two-Ohm operating capability at 120 Watts per channel
7. Rack mountable
8. Optional rack handle kit
9. Close-tolerance components; glass-epoxy printed-circuit boards; five-way binding posts with banana plugs; Mil.-spec. black-anodized aluminum modular construction

Power Output in Watts. RMS per channel 20Hz-20kHz	@ 8 Ohms: 40 @ less than .08% H. Dist. @ 4 Ohms: 80 @ less than 0.3% H. Dist.
Total Harmonic, IM, and TIM Distortions from 0.25 Watts to rated output	Harmonic: 0.08% IM: 0.08% TIM: 0.01%
Hum & Noise below rated power	100dB
Rise Time	2.4 microseconds
Slew Rate	20V/microsecond
Frequency Response	-0.1dB from 0.5Hz to 20kHz
Input Sensitivity for Rated Output	0.7V RMS
Input Impedance	75K Ohms
Damping Factor	250 from 20Hz to 1kHz
Dimensions: W x H x D; Weight:	19" x 4½" x 12"/48cm x 12cm x 30cm; 23 lbs./10.5kg

THE BRIDGE

The Bridge offers a simple way to electrically couple two power amplifiers into one in order to increase power output.

It contains a pair of 180° passive phase inverters which will combine two stereo power amplifiers into one amplifier with approximately quadrupled power output and a slew rate double that of the original individual amplifier. For example, two 40-Watt* Grandsons bridged result in an amplifier with 160 Watts per channel at 8 Ohms, and a slew rate of 40 Volts per microsecond. Two 80-Watt* Son of Ampzillas bridged become one amplifier with more than 300 Watts per channel at 8 Ohms, and a slew rate better than 80 Volts per microsecond. Bridging two 200-Watt* Ampzilla IIA's results in a staggering 720 Watts per channel at 8 Ohms, with a slew rate of 100 Volts per microsecond.

Clearly, for the audiophile on a budget, the Bridge is a necessity. As your system grows, your power requirements will too. Add another Grandson or Son of Ampzilla and expand their capabilities with the Bridge for super-amp power and super-amp sound.



Transformer:	Quadrifilar Wound
Bandwidth:	Source: 600 Ohms 5Hz-25kHz 50 Ohms 0.1Hz-300kHz
Distortion:	Source 50 Ohms at 20V output 100Hz-20kHz: Less than 0.1% 20Hz: Less than .04%
Insertion Loss:	Less than 0.1dB
Size: W x H x D:	Utility 10" x 3.5" x 5.25"/25.0cm x 8.75cm x 13.1cm Rack Mount 19" x 4" x 7"/47.5cm x 10cm x 17.5cm
Weight:	Utility 6 lbs./13.2kg Rack Mount 7 lbs./15.4kg

GAS PRE-AMPLIFIERS

The GAS Company's philosophy of preamplifier design is the "pure approach." The user of GAS Company equipment will not find emphasis on corrective-type systems such as tone equalizers, noise suppressors, noise filters, dynamic expanders, or other circuits intended to correct for deficiencies in associated equipment or the audio signal itself. Instead, GAS Company preamplifiers are designed around their basic functions, which are to amplify and direct the audio signal without frills or non-essentials.

Measurements alone do not always identify the degree of fidelity in reproduction achieved with GAS Company preamps. Only hours of careful listening under a variety of conditions will prove with resounding finality, the value of GAS Company's "pure approach."

Through the use of the latest technology, coupled with GAS Company creativity (such as found in fully-complementary-symmetry and servo-controlled circuitry), GAS Company preamplifiers achieve a sonic purity which is exemplary.

Some of the many features that distinguish the GAS Company's preamplifiers are:

COMPLEMENTARY-SYMMETRY CIRCUITRY

Recognizing the advantages of the Complementary-Symmetry design concept (up to now used primarily in power-amplifiers), GAS Company has from its inception incorporated the inherent superiority of this more costly configuration into all audio circuitry of every GAS Company preamplifier.

SINGLE-STAGE LINE AMPLIFIER

Most preamplifiers utilize a two-stage design, wherein the signal is passed through a line amplifier plus a tone amplifier. The single-stage GAS Company design used in all GAS Company preamplifiers eliminates the tone amp entirely by incorporating the tone controls in the feedback loop of the high-level amplifier. The need for a tone-control defeat switch, as well as the extraneous distortion and noise which might be contributed by an added tone-amp stage, is thus eliminated.

RIAA-EQUALIZED MOVING-COIL PHONO PREAMPLIFIER

An industry innovation with Thaedra (and now Goliath II) is the GAS Company Moving-Coil (MC) phono preamplifier. It is an RIAA-equalized phono preamplifier which has the combined gain of a pre-preamp and a conventional phono preamp. Because this single-stage design with multistage performance is optimized to operate with a moving-coil

phono cartridge, it achieves lower noise and distortion than conventional pre-preamps (which are not equalized and must be run through the magnetic phono preamp). GAS Company's MC phono preamplifier will extract all the detail and information possible from moving-coil cartridges.

SERVO-CONTROLLED CIRCUITRY

The elimination of DC offset voltage at the output of DC coupled amplifiers is difficult to achieve because of such obstacles as thermal drift, parameter variations, and aging. To overcome them, GAS Company developed its servo amplifier which corrects for DC error voltages. This design was first developed for the GAS Company moving-coil phono preamp in Thaedra, wherein the high gain involved demanded the most accurate possible control of its DC parameters. Because of the effectiveness of the Servo-Control Amplifier, GAS Company now incorporates its benefits in all GAS Company preamplifiers.

UNIQUE OUTPUT STAGE

The output circuitry in Thaedra II and Thoebe provides high-current output capability considerably greater than that available with conventional preamplifiers. This higher cost circuitry was incorporated to eliminate output loading due to long cable runs, and to allow the use of low- or high-impedance headphones. In addition, this power output of 1½ Watts provides the added advantage of being able to drive a bi-amped or tri-amped system incorporating passive crossovers, thereby eliminating the need for an electronic crossover. Do-it-yourself instructions for constructing passive crossovers are provided with both Thaedra II and Thoebe.

PERFORMANCE-SELECTED COMPONENTS

Each GAS Company preamplifier features the following: 32- or 22-position thick-film-resistor switch-type level controls for repeatable, precise settings and extremely accurate inter-channel balance; switch-type film-resistor bass and treble controls; a 15-Ampere power switch for controlling the most powerful stereo amplifiers; precisely matched NPN/PNP semiconductors for optimization of the complementary-symmetry circuitry; and use of selected tolerance components to maintain the highest standards of sonic purity. Thaedra II also features gold input/output jacks, preventing corrosion and assuring minimum contact resistance.

THAEDRA II



Thaedra was GAS Company's first preamplifier. Many original design concepts, including a unique servo-controlled moving-coil phono preamp, established Thaedra as one of the world's most highly-regarded preamplifiers. Many of the standard features now on all GAS Company preamps were originated in Thaedra. Further improvements have resulted in Thaedra II which is now GAS Company's premier preamplifier.

Thaedra II has provisions for accommodating up to three tape recorders, and has facilities for transferring recordings from one deck to another while recording a different source onto a third machine. The monitor selector provides for monitoring the output of any of the three tape decks, as well as the signal feeding the third recorder. Other innovative Thaedra II features include:

1. RIAA-equalized moving-coil phono preamplifier with selectable gain settings of 70dB, 64dB and 58dB at 1kHz,

2. Fully complementary symmetry circuitry throughout
3. Servo loop phono circuitry and line-amplifier circuitry
4. Complete DC-coupling after input capacitors
5. High power output of more than 1½ Watts to drive low-impedance headphones and passive crossovers directly
6. Tone controls located in feedback loop of line amplifier thus eliminating need for a tone-defeat switch
7. 32-position, switch-type environmentally-sealed discrete-film resistor level controls. 21-position, switch-type environmentally-sealed discrete-film resistor tone controls
8. Accommodations for three stereo tape recorders with full dubbing and monitoring facilities
9. Negligible Transient Intermodulation (TIM) Distortion
10. Switchable low-frequency filter—10Hz, 20Hz, 30Hz, 50Hz, or off
11. 15-Ampere capacity power switch
12. Gold-plated audio input and output jacks throughout
13. All nickel-plated steel, modular construction
14. Gold-plated audio cables supplied

Total Harmonic and IM Distortion at 2.0V, 600 Ohms	0.01%
Signal-to-Noise—Moving-coil phono ref. 1mV in	83dB
Sensitivity	0.6mV
Signal-to-Noise—Phono, ref. 10mV in—20Hz-20kHz	86dB
Sensitivity	3.2mV
Signal-to-Noise—High level, ref. 2.0V out—20Hz-20kHz	100dB
Sensitivity	0.2V
Frequency Response RIAA Phono, 20Hz to 20kHz	±0.2dB
High level	±0.1dB
Dimensions: W x H x D:	17" x 12¾" x 6"/ 43cm x 32cm x 15cm
Weight:	33 lbs./15kg

THOEBE

The Thoebe preamplifier is an example of the GAS Company's desire to manufacture stereo components to fit every need. Thoebe is, without question, a state-of-the-art performer, but at an affordable price.

Thoebe shares the same circuit topology as Thaedra, incorporating many of Thaedra's specifications and functions. Thoebe also has provisions for powering Goliath, GAS Company's moving-coil cartridge phono preamplifier, should moving coil cartridges be used. Thoebe has many other features, including:

1. Fully-complementary symmetry circuitry throughout
2. DC-coupled circuitry after input isolation capacitors
3. Servo-loop phono preamplifier
4. Single-stage servo-loop line amplifier
5. High power output of more than 1½ Watts to drive low-impedance headphones and passive crossovers directly
6. Accommodations for two tape recorders with full dubbing and monitoring facilities
7. Four-position low frequency filter—10Hz, 20Hz, 30Hz, or off
8. Provision for powering Goliath
9. Tone controls located in feedback loop of line amplifier thus eliminating need for a tone-defeat switch
10. Negligible Transient Intermodulation (TIM) distortion
11. 21-position, discrete-film resistor, switch-type tone controls; 22-position, discrete-film resistor, switch-type level control
12. Muting control reduces output 15dB
13. 15-Ampere capacity power switch
14. Close-tolerance components; glass-epoxy printed circuit boards; nickel-plated steel, modular construction
15. Gold-plated audio cables supplied

Total Harmonic and IM Distortion at 2.0V, 600 Ohms	0.01%
Signal-to-Noise—Phono, ref. 10mV in—20Hz to 20kHz	84dB
Sensitivity	3.2mV
Signal-to-Noise—High level, ref. 2.0V out—20Hz-20kHz	100dB
Sensitivity	0.2mV
Frequency Response RIAA Phono, 20Hz to 20kHz	±0.3dB
High level	±0.1dB
Dimensions: W x H x D:	17" x 5¼" x 8"/ 43cm x 13cm x 20cm
Weight:	28 lbs./13kg

THALIA



Thalia, GAS Company's newest preamplifier, sets new standards of excellence for preamplifiers in its class. Incorporating DC Servo-controlled, fully-complementary audio circuitry similar to that in Thaedra II and Thoebe, Thalia offers the superior sonic ability and advanced design concepts typical of GAS Company products.

Designed to be paired with the Grandson stereo power amplifier, Thalia will meet the requirements of the most demanding audiophile desiring a high-quality, versatile control center. Thalia offers features which belie its modest price, including:

1. Fully-complementary symmetry circuitry throughout
2. Servo-loop phono preamplifier
3. DC-Coupled circuitry after the input coupling capacitors
4. Tone controls located in feedback loop of the line amplifier thus eliminating need for tone defeat switch
5. Accommodations for a stereo tape recorder
6. 21-position, discrete-film resistor, switch-type tone controls; 22-position, discrete-film resistor, switch-type level control
7. Output for high-impedance headphones
8. 10Hz low-frequency filter
9. Muting control reduces output 15dB
10. Stereo mode switching
11. 15-Ampere power switch capacity
12. Close-tolerance components: glass-epoxy printed circuit boards, nickel-plated steel construction

Total Harmonic and IM Distortion at 2.0V, 600 Ohms	0.015%
Signal-to-Noise - Phono ref. 10mV in - 20Hz-20kHz	82dB
Signal-to-Noise - High level, ref. 2.0V out - 20Hz-20kHz	100dB
Frequency Response RIAA Phono, 20Hz to 20kHz	±0.5dB
High level	±0.1dB
Dimensions: W x H x D:	19" x 3½" x 10"/ 48cm x 9cm x 25cm
Weight:	11 lbs./5kg

GOLIATH

Announcing two more innovations in high-fidelity sound reproduction from the GAS Company: Goliath II and Powered Goliath II. Both are servo-controlled, fully-complementary phono preamplifiers specifically designed for use with moving-coil phono cartridges.

It is the same revolutionary moving-coil phono preamplifier found in Thaedra II that provides the extra gain required for moving coils with none of the added noise and distortion of step-up transformers or pre-preamps. Goliath II plugs into a high-level input—not the phono input. This not only reduces noise and distortion, it frees the phono inputs to accept standard magnetic cartridges.

Goliath's circuitry is fully-complementary and DC servo-controlled. The gain is user-adjustable on the front panel in 3dB increments, from 58dB to 70dB, accommodating from the lowest to highest sensitivity phono cartridges. A power jack on Thoebe's rear panel supplies Goliath's power requirements. Panel height is matched to Thoebe.

SELF-POWERED GOLIATH II.

For audiophiles desiring a self-powered version of Goliath, GAS Company offers the self-powered Goliath II, which can be added to any stereo preamplifier. The circuitry is identical



to Goliath II. It offers the same RIAA-equalized, fully-complementary, DC servo-controlled performance, with front-panel gain adjustment from 58dB to 70dB in 3dB steps. It also plugs into a high-level input, thus offering an additional phono preamplifier function.

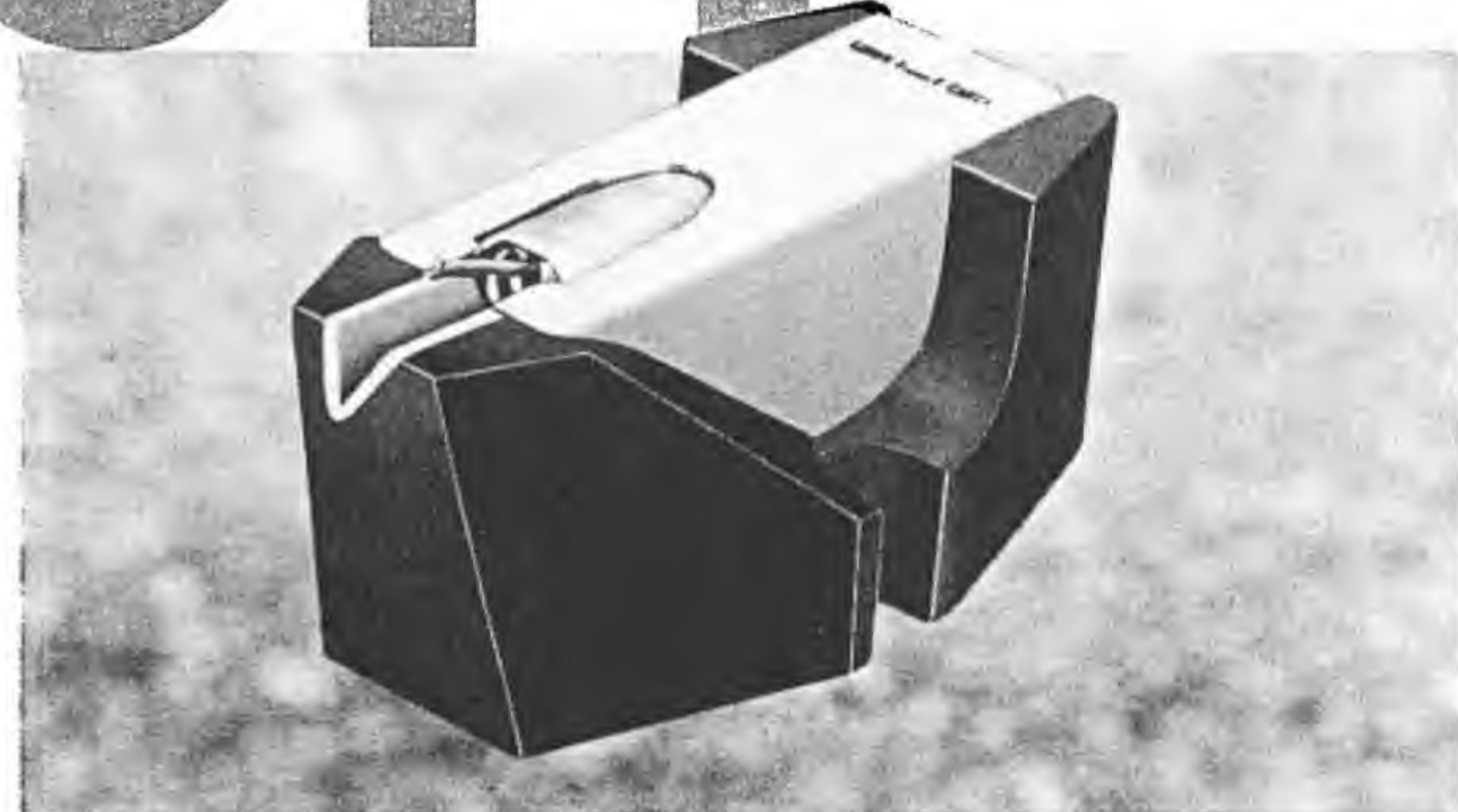
Total Harmonic and IM Distortion at 2.0V, 600 Ohms	0.01%
Signal-to-Noise - Phono, ref. 1mV in - 20Hz-20kHz	83dB
Frequency Response RIAA Phono, 20Hz to 20kHz	±0.2dB
Sensitivity	0.6mV
Dimensions: W x H x D:	2½" x 5¼" x 8"/ 6cm x 13cm x 20cm
Weight:	5 lbs./2.3kg
Self Powered Model	19" x 3½" x 8"/ 48cm x 9cm x 20cm 11 lbs./5kg

SLEEPING BEAUTY

GAS Company has long recognized the superiority of the moving-coil cartridge for optimum reproduction of sound from a phono disc. For many years, it has been the choice of professionals and serious audiophiles.

GAS Company now offers the Sleeping Beauty series of moving-coil cartridges. The four Sleeping Beauty models differ only in stylus geometry and cantilever details. All feature a high intensity field, low-weight Alnico V magnet structure to improve tracking of warped records. The beryllium cantilever stylus geometry has been tailored for optimum and extended, non-resonant response with minimal distortion throughout the critical high-frequency region. These features give Sleeping Beauty the capacity to provide a remarkable musical clarity and sonic definition.

Each cartridge is supplied with mounting hardware, installation parts, and individuallycharted frequency responses showing the output performance of both channels.



Model	SPHERICAL (S)	ELLIPTICAL (E)	SUPER ELLIPTICAL (X)	SHIBATA (B)
Frequency Response (Hz)	10-30,000	10-35,000	5-40,000	5-40,000
Output Voltage @ (5cm/sec)(mV)	0.30	0.30	0.27	0.27
Separation at 1kHz (dB)	25	27	34	34
Compliance at 100Hz (cm/dyne)	13×10^{-6}	13×10^{-6}	15×10^{-6}	15×10^{-6}
Stylus Tip Dim. (mil.)	0.6	0.3 x 0.6	0.3 x 0.6	Biradial

ALL UNITS: Load Impedance: 20-1000 Ohms.

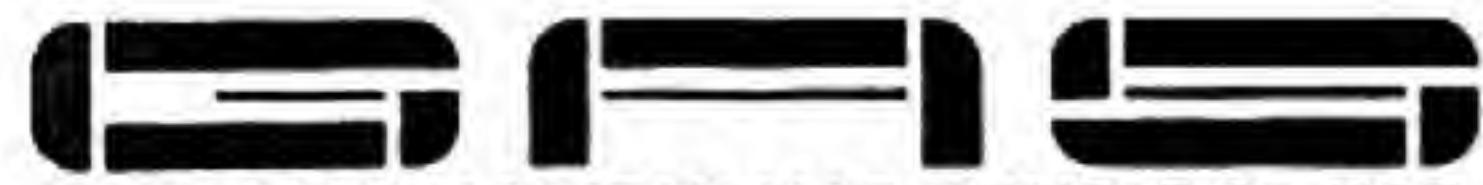
Recommended Tracking Force: 1.8 grams.

Impedance: 6 Ohms.

Channel Balance at 1kHz: 1dB.

Structure Mass: 5.5 grams.

Specifications subject to change without notice.



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